



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **07197125 A**(43) Date of publication of application: **01.08.1995**

(51) Int. Cl. **C21D 8/10**  
// C22C 38/00, C22C 38/32

(21) Application number: **06012064**(22) Date of filing: **10.01.1994**(71) Applicant: **NKK CORP**

(72) Inventor: **KURIKI YOSHIRO**  
**NAKAJIMA KATSUMI**  
**YASUKAWA MASAHIKO**  
**OYADOMARI NORIAKI**

(54) **PRODUCTION OF HIGH STRENGTH STEEL  
PIPE HAVING EXCELLENT SULFIDE STRESS  
CORROSION CRACK RESISTANCE**

## (57) Abstract:

PURPOSE: To obtain a steel pipe having excellent SSCC resistance and strength by acceleration-cooling after hot pierce-rolling a specific composition of steel billet, successively, mandrel-rolling to make a seamless steel pipe and, thereafter, immediately quenching and tempering.

CONSTITUTION: The composition of the steel is made to be, by wt.%, 0.15-0.4 C, 0.1-1 Si, 0.3-1 Mn, 0.1-1.5 Cr, 0.3-1 Mo, 0.0005-0.003 B, 0.01-0.1 Al, 0.003-

0.01 N,  $\leq 0.015$  P,  $\leq 0.005$  S, and further, one or more kinds of 0.01-0.05 V, 0.01-0.05 Nb and 0.01-0.03% Ti and the balance Fe. This steel billet is heated to 1250-1350 °C and the Mannesmann type seamless rolling is applied to execute hot-piercing. This pipe is acceleration-cooled to the recrystallizing temp. +50 °C to the recrystallizing temp. +100 °C. Rolling reduction is executed to this pipe by the mandrel-rolling at  $\leq 30\%$  and at the recrystallizing temp. to the recrystallizing temp. +30 °C, and finished at  $\leq A_{r3}$  transformation point to make the seamless steel pipe. This pipe is immediately water-hardened and, thereafter, the tempering is executed.

COPYRIGHT: (C)1995,JPO